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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/665,224

09/18/2003

Arihiro Takeda

1117.68335

6265

7590

08/20/2004

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EXAMINER

DUONG, THOI V

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 08/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/665,224

Applicant(s)

TAKEDA ET AL.

Examiner

Thoi V Duong

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 32 ~~is/are~~ pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7 and 32 ~~is/are~~ rejected.
- 7) ☒ Claim(s) 5 ~~is/are~~ objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☒ Certified copies of the priority documents have been received in Application No. 10/047,216.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Priority***

1. This application appears to be a division of Application No. 10/047,216, filed January 14, 2002. A later application for a distinct or independent invention, carved out of a pending application and disclosing and claiming only subject matter disclosed in an earlier or parent application is known as a divisional application or "division." The divisional application should set forth the portion of the earlier disclosure that is germane to the invention as claimed in the divisional application.

Accordingly, claims 8-31 and 33 were cancelled and claims 1-7 and 32 are currently pending in this application.

***Inventorship***

2. In view of the papers filed March 19, 2003, the inventorship in this nonprovisional application has been changed by the deletion of Takahiro Sasaki. Currently, the joint inventors in this application are Arihiro Takeda, Shingo Kataoka, Tsuyoshi Kamada, and Kazuya Ueda.

The application will be forwarded to the Office of Initial Patent Examination (OIPE) for issuance of a corrected filing receipt, and correction of Office records to reflect the inventorship as corrected.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

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by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-4, 6, 7 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Takeda et al. (US 2003/0202146 A1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Re claim 1, as shown in Figs. 24 and 25, Takeda et al. discloses a liquid crystal display device comprising:

- a first substrate 1 having thereon a pixel electrode 30 and an active element 6;
- a second substrate 2 having thereon an opposed electrode 15; and
- a liquid crystal layer 18 interposed between said first and second substrates with said electrodes facing each other,

wherein, when a direction of an orientation regulating force (generated by projections 31 or slits 30a, 30b) given to liquid crystal molecules of said liquid crystal layer within a region of said pixel electrode taken as a first direction and a direction of an orientation regulating force due to an edge said pixel electrode on said first substrate given to said liquid crystal molecules near said edge taken as a second direction, an orientation control element 30a, 30b at the connecting portions 30e giving an orientation regulating force in a third direction which counteracts said orientation regulation force in said second direction is locally provided in a part near and outside said edge (page 13, paragraphs 205 and 212).

Re claim 2, said orientation control element is constituted by a plurality of fine slits formed in said pixel electrode in an oblique direction relative to an extending direction of said edge (Fig. 25).

Re claim 3, at least a part of said fine slits are different in shape and/or spaced interval of arrangement from each other (Fig. 25).

Re claim 6, a dielectric anisotropy of said liquid crystal molecules said liquid crystal layer is negative (page 10, paragraph 172).

Re claim 7, another orientation control element 31 regulating said liquid crystal molecules of said liquid crystal layer be oriented in said first direction is provided on said second substrate (Fig. 24 and page 12, paragraphs 208 and 210).

Re claim 4, as shown in Fig. 30, Takeda et al. further discloses that the intersecting portion of the slits 38a, 38b formed on the pixel electrode 38 is positioned on the outside of the pixel electrode for eliminating the influence of the electric field by

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the edge of the pixel electrode. This intersecting portion of the slits 38a and 38b is considered as a hollow formed in a part other than said pixel electrode (page 13, paragraph 233)

Re claim 32, as shown in Fig. 30, in addition to the liquid crystal display device shown above, Takeda et al. also discloses a liquid crystal orientation method of liquid crystal molecules of a liquid crystal layer comprising the step of:

giving an orientation regulating force to a part (an intersection portion of the slits 38a and 38b) near an edge of said pixel electrode on said first substrate in a third direction which different of said liquid crystal from a first direction an orientation regulating force (generated by projections 37 and slits 38a, 38b) given to said liquid crystal molecules of said liquid crystal layer within a region of said pixel electrode and a second direction of an orientation regulating force given due said edge of said pixel electrode on said first substrate to said liquid crystal molecules near said edge (page 13, paragraph 233).

***Allowable Subject Matter***

5. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: none of the prior art of record fairly suggests or shows all of the limitations as claimed. Specifically,

None of the prior art of record discloses, in combination with other limitations as claimed, an orientation control element formed so that an angle "theta 2" made by

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second and third direction is bigger than an angle "theta 1" made by first and second directions when said angle "theta 1" is obtuse.

The most relevant reference, US 2003/0202146 A1 of Takeda et al., fails to disclose or suggest those angles. The Takeda et al.'s reference only discloses a liquid crystal display device comprising an orientation control element formed for giving an orientation regulating force in a third direction which counteracts the orientation regulation force in the second direction.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

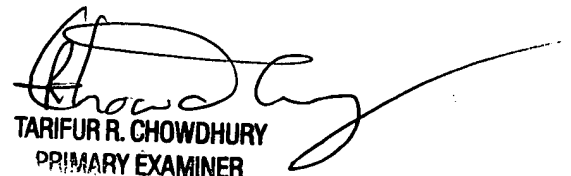
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (571) 272-2293.

Thoi Duong



08/11/2004



TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER